Remarks

In the final Office action, claims 1-11 were rejected under 35 U.S.C. § 102(b), as being anticipated by or, in the alternative under 35 U.S.C. 103(a) as obvious over U.S. Patent No. 4,916,019, issued to Nakatani et al. ("Nakatani et al.").

In this response, claim 1 has been amended. Claims 1-14 are pending, with claims 12-14 withdrawn from consideration.

Reconsideration and withdrawal of the rejections and objections in view of the amendments and following remarks is hereby respectfully requested.

A. Examiner Interview:

Applicants thank the Examiner for participating in a telephone interview with Applicants attorney, Thomas Canty, on March 8, 2006. In the interview, the rejections in view of Nakatani were discussed. The Examiner explained that the phrase "configured to" was being treated as a future intended limitation without patentable weight. Applicants suggested using the phrase "UV-hardenable clear lacquer" instead. No agreement was reached.

B. Rejections under 35 U.S.C. 102(b)or, in alternative, under 35 U.S.C. 103(a):

Claims 1-11 were rejected under 35 U.S.C. 102 (b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being unpatentable over Nakatani et al.

Nakatani et al., which is a family member to the German patent application no. DE 37 02 503 discussed at paragraphs [0014] and [0015] of the present application, describes cationic electrodeposition coating composition for forming a multiplayer film. Nakatani specifically teaches hardening the coating by baking and requires an immersion-based process.

Independent claim 1 recites a coating composition for formation of a self layering or self coating lacquer system compromising at least two components that are emulsified or dispersed in water, wherein at least one of them is a UV-hardenable clear lacquer.

Clear support for the phrase "UV-hardenable clear lacquer" is found in the original specification, for example, at paragraph [0044].

Applicants respectfully submit that the phrase "UV hardenable" as used with paints and lacquers is readily understandable by a person of ordinary skill in the art to refer to a component that is specially adapted to be cured or hardened by UV radiation. Applicants submit herewith a

copy of a specification for the UV hardenable clear lacquer UVHC8558, which is disclosed at paragraph [0044] of the specification as an example of a UV-hardenable clear lacquer. The phrase "UV-hardenable" is used to describe countless commercial products such as films, lacquers, inks, etc. that are specially adapted to be hardened by UV radiation. In addition, a simple word search of U.S. issued patents reveals that the phraseology is also used in patents and patent applications as well.

Nakatani et al. provides no suggestion for the feature of a UV hardenable lacquer. Nor does Nakatani suggest a coating composition having at least one UV-hardenable clear, water-based component. On the contrary, Nakatani et al. specifically teaches baking the coating composition at a fixed temperature. Column 6, lines 52-59. Thermal curing involves heating of the layer or even the substrate, which is a relatively slow process step compared to UV-radiation induced curing. During heating, remixing of the components would typically take place until drying/curing of the coating would begin to take place.

Withdrawal of the rejections to claims 1-11 under 35 U.S.C. 102(b) and/or under 35 U.S.C. 103(a) is respectfully requested.

CONCLUSION

It is respectfully submitted that the application is now in condition for allowance.

Respectfully submitted,

DAVIDSON, DAVIDSON & KAPPEL, LLC

By: _____
Thomas P. Canty, Reg. No. 44,586

Davidson, Davidson & Kappel, LLC
485 Seventh Avenue - 14th Floor
New York, New York 10018
(212) 736-1940

GE Silicones

UVHC8558

UVHC8558 Abrasion Resistant UV Curable Silicone Hard Coat

Product Description

UVHC8558 silicone hardcoat resin has been found to yield a clear, mar-resistant film when applied to a suitably prepared plastic substrate. It can be applied by flow, dip, spin, or spray coating.

UVHC8558 hardcoat is designed to give primerless adhesion to many thermoplastic substrates that are cast, extruded, molded or blow molded. It offers mar-resistance, high gloss, and protection from chemical attack. UVHC8558 is suited for indoor environments.

Key Performance Properties

- Fast cure
- Abrasion resistant
- Mar-resistant
- Scratch resistant
- Optical clarity
- Chemical resistant
- Solvent resistant

Applications

Compatibility

GE Silicones tests have shown UVHC8558 is suitable for use on certain grades of the following polymers. These tests, however, did not include all grades of these polymers nor did they reflect all conditions used in particular applications. GE Silicones recommends customers test the coating on the specific grade or grades of polymers to be used and the tests be done under the actual environmental conditions the specific application will encounter before committing to production using UVHC8558.

- Ultem
- Polycarbonate
- Valox
- Polystyrene
- Polycarbonate/Polyester

- Filled Nylon
- Acrylic
- Polyolefin
- Cycolac
- Melamine
- Polyester

Some substrates may require pretreatment (i.e., flame, corona discharge) to achieve primerless adhesion.

Typical Product Data

Property	UVHC8558
Solids Content, %	100
Flash Point, Pensky-Martin Closed Cup	> 100C(212F)
Density, lbs/gal	10
Viscosity, cstk	20 - 80
Warranty Period	3 months min. at 24C(75F) in original sealed containers.

Performance Data

(0.2 to 0.4 mil Coating builds)

Taber Abrasion, 500 cycles/500G on unprimed polycarbonate (CS10F wheels)	5 - 15% Haze measured per ASTMD1003.Higher haze suggests greater abrasion. *

*Humdity during coating and testing will affect final values.

Chemical/Solvent Resistance (Coating cured using two Type H Lamps at 2.1 inches lamp to part)

Solvent	Result
Acetone	No change
Gasoline	No change
Methanol	No change
Toluene	No change
Sodium Hydroxide (10%)	No change

Test Conditions:

1. Place a cottonball saturated in the test solvent onto the coated surface and cover with a panel.

2. At 30 minutes (continuous saturation) remove cottonball and check for changes in appearance.

Specifications

Typical property data values should not be used as specifications. Assistance and specifications are available by contacting GE Silicones at 800/255-8886.

Instructions for Use

General Requirements

Coating area should be clean, dust-free, well ventilated and with the relative humidity controlled to 50% or less if product is not being used at 100% solids. The parts should be washed or wiped clean with isopropyl alcohol a mild detergent solution and clean water rinse or an ultrasonic bath, followed by a filtered-air blow-off and a final ionized-air blow-off. Cleanliness is critical for production of good parts. The material should be filtered continuously or just before use through a 0.5 to 1.0 micron filter. UV equipment with good convection and air exchange is recommended.

UVHC8558 Hard Coat Application

The UV hardcoat can be applied to clean unprimed parts by dip, spray, spin, or flow coating. To cure the product we recommend the use of a UV lamp that can supply light at 250 to 360 nm with 750 mJ/cm2 of minimum energy. Production speeds will depend on the type of UV lamp used to cure this product.

The product may be diluted in isopropyl alcohol to achieve the solids level for the required build. It is recommended to dilute the product to 30% by weight for spraying, 50%-70% for spin coating, 40%-45% for dipping, and 10%-40% for flow coating. The product maybe used at 100% solids.

To reduce the chance of the coating blushing, it is recommended to apply the coating in a controlled humidity environment of less than 40% if solvents are going to be used to dilute the material. If the product is used with no solvents then higher humidity is acceptable. The flash off times of the solvent can vary due to the humidity present. Because of this it is important to control the humidity to less than 40% when coating polycarbonate to alleviate the hazing that can occur. It is important to minimize the time that the uncured coating remains on the polycarbonate part for more than 90 seconds before curing under UV lights. If hazing occurs then the contact time of the coating with the polycarbonate part should be reduced until the hazing disappears. This product may be less aggressive to other plastics and longer flash times can be held without hazing.

Handling and Safety

Material Safety Data Sheets are available upon request from GE Silicones. Similar information for solvents and other chemicals used with GE products should be obtained from your suppliers. When solvents are used, proper safety precautions must be observed.

CAUTION

Compatibility of GE Silicone hardcoat and polycarbonate resin, including GE LEXAN® resin, is dependent on a number of factors including operational stresses, chemical exposure, temperature levels, impact and exposure to ultraviolet light.

While it is up to the end user to determine what application specific testing is appropriate, it is suggested that all polycarbonate resin applications be tested for at least 30 days for compatibility and crazing with this hardcoat before use. There is no dependable substitute for careful testing of prototypes of production parts in typical operating environments.

Storage and Warranty Period

The warranty period is 3 months from the date of shipment from GE Silicones if stored in the original unopened container at 75F(24C).

Store material between 50F(10C) and 90F(68C). It is recommended not to leave this product exposed to any light since it will cure over time.

Availability

GE Silicone products may be ordered from GE Silicones, Waterford, NY 12188, the GE Silicones sales office nearest you, or where appropriate, an authorized GE Silicone product distributor.

Government Requirement

Prior to considering use of a GE Silicones' product in fulfilling any government requirement, please contact the Government and Trade Compliance office at 413-448-4624.

CDS4979

LEGAL DISCLAIMER

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